Amendments to the Specification:

Please replace the paragraph beginning at page 7, line 5, with the following redlined paragraph:

Another approach is disclosed by Kooyman and Krull, Langmuir 7 (1991) 1506-1509~~4~~, namely SPM using a small vibrating mirror in combination with a Kretschmann configuration to adjust the angle of incidence. A disadvantage is, however, that the probed spot is not stationary during the angular scan, *i.e.*, all sites within a sensing area are not probed by light at an equal angle of incidence range, unless bulky optics is covering the sensing area at an excess.

Please replace the paragraph beginning at page 17, line 21, with the following redlined paragraph:

As mentioned above, the present invention relates to an optical method and apparatus for large area or microscopical analysis of structures on a sensor surface, such as real-time monitoring of a chemical sensor or biosensor surface. Usually, the sensor surface has a plurality of individual subzones or areas at which different interactions may take place and produce thin layer structures of optical thicknesses that differ between the subzones. Such "multi-spot" surfaces may be used for a variety of analytical purposes. For example, a surface supporting different ligands on the surface may be subjected to a sample that may contain one or more species, or analytes, capable of binding to respective ligands on the surface. Thereby a sample may be analyzed for the presence of several analytes ~~analyses~~ "in one shot". Other examples and uses are readily apparent to the skilled person.

Please replace the paragraph beginning at page 19, line 19, with the following redlined paragraph:

The sensor surface is (in the illustrated case) assumed to be exposed on its upper side to a sample containing analytes~~analyses~~. The sample may advantageously be contacted with the sensor surface ~~sample~~ in a flow type cell, *e.g.*, as described in the aforementioned

US-A-5,313,264 where one or more flow cells are defined by the sensor surface being docked against one or more open channels in a fluidic block or cartridge.

Please replace the paragraph beginning at page 19, line 24, with the following redlined paragraph:

With reference again to the ray path in Figure 1, the beam is totally internally reflected at the sensor interface side of the coupling prism. The p-polarized component of the beam then passes a polarizer, P, and a main first part of the beam is directed into a first main part of an objective, which main part consists of a spherical objective, SO, producing a real image on matrix detector array, D, of the light intensity reflected from the sensor surface area. The detector array D is arranged such that the real image of the sensor area is produced on a first rectangular main part, D1, of the array. That is, the first part, SO, of the objective has its real image plane positioned at the plane of the photodetector array. Reference signs ~~Figures~~ 1, 2 and 3 at the detector array D denote the respective images of the corresponding subzones on the sensor surface SS, indicated at 1′, 2′ and 3′, respectively.

Please replace the paragraph at page 22, line 16, with the following redlined paragraph:

The aperture is an unobscured opening, taking the shape of a circle, ~~quadrant~~quadrate, or rectangle. The aperture may be positioned either within, or at the edge of the obscuration.

Please replace the paragraph beginning at page 24, line 18, with the following redlined paragraph:

The light beam is then dispersed by the grating T so that the direction of propagation of the collimated beam depends upon its wavelength. This beam is then brought to a focus by a cylindrical lens, L5 (alternatively, a mirror in a folded configuration), so that for a scanned wavelength, a spectrum consisting of a series of monochromatic images, $\lambda 1$, $\lambda 2$, and $\lambda 3$ of the entrance slit S is obtained at the above-mentioned linear minor area part of a

two-dimensional detector array, D2, so that each reflected wavelength corresponds to a specific detector position within this detector area.

Please replace the paragraph beginning at page 26, line 21, with the following redlined paragraph:

With reference first to Figure 16, the illustrated biosensor system comprises a light source, LS, and a collimator optics, CO, to produce a parallel beam. The latter passes an interference filter, I, and then, as a monochromatic beam, passes a first linear polarizer, P1. The s-component of the this linearly polarized light is then retarded by a quarter-wave plate, Q, below called compensator, which creates an elliptically polarized light beam, impinging on a first flat scanner mirror, SM1. Mirror SM1 deflects the beam onto a second scanning mirror, SM2, which in turn deflects the beam into a coupling prism, Pr (as before, grating coupling is also possible). The beam is totally internally reflected at the sensor interface side of the coupling prism, and then passes a second polarizer, P2, below called analyzer. A main first part of the beam is directed into a first main part of an objective consisting of a spherical objective, SO, producing a real image on a first rectangular main area part of a detector array, D, of the light intensity reflected from the sensor area.

Please replace the paragraph beginning at page 34, line 17, with the following redlined paragraph:

For microscopy applications, the sensor area is enlarged, typically 20-40X. This image may be detected by a photodetector matrix, *e.g.*, of CCD (charged-coupled device) camera type. Alternatively, this image may be further enlarged by an ocular, typically 10-20X, and projected on the photodetector matrix.

Please replace the paragraph beginning at page 40, line 9, with the following redlined paragraph:

In Figure 24a the following zone-coordinates (row, column) show light extinction due to SPR: (1,1), (1,2), (1,3), ~~which~~ while the higher angle of incidence in Figure 24b causes SPR in the zones: (2,1), (2,2), (3,1), (3,2), revealing a higher surface concentration in the latter

zones. In Figure 24c, the zones of the sensor surface having yet higher surface concentration of sample are revealed in zones (4,2) and (4,3). In Figure 24d, the zone of the sensor surface having the highest surface concentration of sample are revealed in zone (4,1).